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Teachers' Collective Bargaining: Its Occurrence and Impact on Wages, Employment, and Expenditures in States Without Collective Bargaining Legislation.

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**Teachers' collective bargaining: Its occurrence and impact
on wages, employment, and expenditures in states without
collective bargaining legislation**

Duplantis, Malcolm Michael, Ph.D.

The Louisiana State University and Agricultural and Mechanical Col., 1993

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**TEACHERS' COLLECTIVE BARGAINING:
ITS OCCURRENCE AND IMPACT ON WAGES,
EMPLOYMENT, AND EXPENDITURES IN
STATES WITHOUT COLLECTIVE
BARGAINING LEGISLATION**

A Dissertation

**Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy**

in

**the Department of
Administrative and Foundational Services**

**by
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May 1993**

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ABSTRACT

This study analyzed the extent of teachers' unions activities in the eleven states without favorable collective bargaining legislation and the impact of collective bargaining agreements on teachers' wages, employment rates, and per-pupil expenditures. Specifically, school districts were examined in the six states which authorize, but do not require collective bargaining, and the five states which have no legislative provisions concerning collective bargaining for teachers. School districts were examined if student enrollment exceeded 10,000.

A two-phased methodology was used to address the research questions. Phase 1 was a qualitative study which utilized data from a survey of school superintendents in selected districts in order to obtain information concerning teacher labor relations. Survey instruments were distributed to 106 school superintendents of which 83 responded. Data from 82 districts were analyzed. Phase 2 was a quantitative study utilizing multiple regression techniques to examine the statistical relationship between teachers' union activities and teachers' wages, employment rates, and per-pupil expenditures within the school district.

The results of the qualitative study indicate that teachers' unions are actively engaged in

collective bargaining with school boards even though school boards are not required to do so. Approximately thirty percent of the school districts were engaged in collective bargaining with the majority of collective bargaining contracts first being negotiated in the 1960s and 1970s. The rating by superintendents in districts without collective bargaining of teachers' level of concern for four financial and five educational reform issues suggest that the demand for the services provided by teachers' union exist in these districts.

The empirical results of Phase 2 of the study indicate that collective bargaining significantly increases wages by approximately 9 percent compared to nonbargaining districts. The effect of a collective bargaining agreement on employment rates was estimated to be approximately 39 percent. The effect of collective bargaining on per-pupil expenditures was found to be less statistically significant and was estimated to be approximately 9 percent. The effect of endorsements of school board candidates by teachers' unions, however, was statistically insignificant in the three equations.

CHAPTER 1

INTRODUCTION

Background of the Study

Although public sector union membership and collective bargaining coverage have remained constant in most occupations, teachers' unions have experienced significant growth during the 1980s (Freeman & Ichniowski, 1988). The two major teachers' unions, the American Federation of Teachers (AFT) and the National Education Association (NEA), presently represent over 90 percent of the nations' teachers. Additionally, over 68 percent of the country's local school districts are covered by formal collective bargaining agreements (Freeman, 1986). Local school boards throughout the nation generally have similar missions, but the labor relations between school board and teachers vary considerably based on state laws, local customs, and citizens' attitudes towards unions.

Most research on public sector union growth emphasizes the role of protective bargaining legislation (Moore, 1977; Moore 1978; Reid & Kurth, 1984; Ichniowski, 1984; and Saltzman, 1985). Although some researchers reject the view that these laws are the primary cause of public sector union growth (Burton, 1979; Burton & Thomason, 1988), studies demonstrate the importance of collective bargaining

laws to union formation and growth. For instance, Zax and Ichniowski (1990) find that duty-to-bargain laws significantly increased the probability of bargaining union formation of local governmental departments between 1977 and 1982. They argued that the changes in unionization attributed to duty-to-bargain laws were so large that they accounted for nearly all of the differences in average unionization rates between states with and without these laws. Similarly, Saltzman's (1985) study of the cause and consequences of the growth of teacher unionism concludes that bargaining legislation provides a major impetus to union growth.

Researchers have attempted to characterize and code state collective bargaining laws on the basis of their favorableness toward collective bargaining. The National Bureau of Economic Research (NBER) Public Sector Collective Bargaining Law Data Set provides a comprehensive source that describes the status of state public sector collective bargaining policies from 1955 to 1985 (Valletta & Freeman, 1988). The data set identifies seven types of labor relations which characterize the collective bargaining rights afforded public employees. Specifically these are: duty to bargain (explicit), duty to bargain (implied), right to meet and confer, right to present proposals, employer

authorized but not required to bargain with unions, collective bargaining prohibited, and no legal provisions.

As of 1991, thirty-three states mandate or strongly foster collective bargaining agreements in public education by the passage of duty-to-bargain laws. Six states authorize but do not require bargaining with teacher unions. Five states presently have no legislative provisions governing collective bargaining, but contain districts which have adopted collective bargaining contracts. Six states have legislative provisions which prohibit collective bargaining. As expected, school districts in states with duty-to-bargain laws or prohibitive bargaining legislation retain no local option regarding requests by teachers' union for collective bargaining.

A second factor often discussed as an important determinant of public-sector union growth is the increase in employee demand for union services. The increase in demand for union services centers on the belief that public employees were dissatisfied with employment conditions. Employees joined unions in anticipation that union membership and collective bargaining would provide an instrument to alleviate this dissatisfaction (Ashenfelter & Pencavel, 1969;

Scoville, 1971; Bain, 1970; Moore & Newman, 1975; Dalton, 1982).

Teachers' demand for union services is influenced by economic and non-economic conditions in the school district. Although teachers' salaries may be modest compared to private sector employees, teachers generally enjoy extensive job security and good fringe benefits. The effects of reform legislation which changed tenure rights and certification, along with inadequate salary increases, may increase the degree of job dissatisfaction which may affect union demand for union services. Additionally, school systems which are experiencing fiscal difficulty must consider options such as reduction-in-force, reduction of salaries and benefits, and changes in working conditions in order to meet financial obligations. The adoption of these policies might also increase demand for union services.

Finally, the level of employer opposition to union organizing is sometimes identified as a factor to consider when examining the growth of public sector unionism. Government employer resistance to union growth is usually considered modest when compared to the intensity of employer opposition in the private sector (Freeman, 1980; Freeman, 1988). Four main reasons have been given for the lack of public sector employer resistance (Freeman, 1988). First, public

sector workers constitute an especially active political group, which is able, at the ballot box, to punish or reward politicians who are their employers, even though public sector workers generally are only a small proportion of voters. Second, the cost of illegal opposition is likely to be greater for public than for private officials, because public officials who break laws are more likely to face removal from office. Third, unions can help public sector employers increase budgets through lobbying for additional public sector expenditures. Fourth, union wage premiums tend to be smaller in the public sector than in the private sector. In short, management opposition to unions can gain profits in the private sector, but can cost votes in the public sector.

The sentiment of the community toward unions is reflected within the local school board and this directly influences the degree of resistance which a school board may attempt. If given an option, employers such as school boards would rather operate without the restraints and procedural requirements of a collective bargaining agreement. When local school districts are not required by law to engage in collective bargaining, a unions' ability to organize teachers and to obtain a collective bargaining agreement will be based on the teachers' demand for

union services, and the school boards' lack of resistance to unions.

Research Questions

Three question are examined in this study.

1. What is the extent of teachers' union activity in large school districts in the eleven states without favorable collective bargaining legislation?

2. What are the prospects for future growth of teachers' unions in large school districts in the eleven states without favorable collective bargaining legislation?

3. What is the impact of collective bargaining agreements on teachers' wages, employment rates, and per-pupil expenditures in large school districts in the eleven states without favorable collective bargaining legislation?

Significance of the Study

This study will provide statistical information (e.g., number of requests for certification elections, number of elections conducted, the results of certification elections, number of collective bargaining agreements) for those states without favorable educational labor relations legislation. Information concerning local school boards and

teachers' unions labor relations is not compiled in those states that have not enacted educational labor relations legislation. Since the focus of the AFT and the NEA has been on the adoption of collective bargaining contracts for its members, this study will indicate whether teachers' unions have been able to obtain collective bargaining rights for their teachers in states that lack favorable collective bargaining legislation.

Second, this study will investigate the superintendent's perception of teachers' concerns with financial and educational reform issues which may affect the demand for union services by teachers. Even though collective bargaining rights are not guaranteed by legislation, teachers within these states join professional associations and unions. The superintendents' perception of teachers' concerns may provide insight into the potential future demand for union services in the states without favorable collective bargaining legislation.

Third, prior research of public sector negotiations suggest that the presence of a collective bargaining agreement significantly affects wages, employment, and expenditures (Freeman, 1986; Ehrenberg & Schwarz, 1986). This study will examine the effects of collective bargaining on wages, employment, and

per-pupil expenditures in states without favorable collective bargaining legislation. Since local school districts are not required to negotiate with teachers' unions, the impact of collective bargaining may differ from previous studies.

Finally, trends in labor relations in public education at the district level may precede changes in public sector labor relations legislation within the states which presently have not enacted favorable legislation. As unions gain status within a state through the adoption of collective bargaining agreements with local school boards, the union is more capable of lobbying for a change in state legislation which would be more favorable to union advancement. Since 1984, for example, the states of Ohio and Illinois have changed their public sector legislation from an employer authorized status to duty to bargain. Similarly, in 1992, a bill mandating duty-to-bargain legislation was passed in New Mexico. This study may provide insight into the prospects for future changes in educational collective bargaining legislation in the six states which presently authorize school boards to negotiate, but does not require collective bargaining, and the five states which presently have no legislative provisions establishing collective bargaining agreements.

CHAPTER 2
OVERVIEW OF TEACHERS' UNIONS AND
THEIR IMPACT ON EDUCATION

History of Teachers' Unions

The organization of teachers began in the 1840s as state associations. These state teacher associations first lobbied for the passage of state laws affecting teacher benefits, including tenure rights, single salary schedules, and retirement programs for teachers. Historically, many state teacher organizations rather than state departments of education assumed responsibility for maintaining state educational data (Cresswell, Murphy, & Kerchner, 1980). In 1857, ten state teacher associations joined to establish a National Teachers' Association (NTA). The NTA's major objective was to upgrade teaching into a profession, but their organization experienced little success in achieving this goal in its early years.

National Education Association (NEA)

In 1870, the NTA became the NEA by becoming an umbrella organization within which four departments-- Normal Schools, Higher Education, Superintendence, and Elementary Education--were affiliated. In 1884, the NEA used widespread publicity to improve attendance at

its annual meeting as a means of membership recruitment. The landmark 1884 meeting also created the National Council of Education which served as the governing board of the association. This council, limited to a small number of the nation's leading educators, quickly became the most powerful and respected part of the NEA. This group of leaders also controlled the NEA presidency throughout the rest of the century (Urban, 1982).

Throughout the early history of the NEA, the most powerful and influential group of teachers was the public school teachers in Chicago. Led by teachers Catherine Goggins and Margaret Haley, the Chicago Teachers Federation was able to secure enough money from taxes to pay teachers a fair salary. This was accomplished when the Illinois Supreme Court ruled in favor of the Chicago Teachers Federation concerning taxation for public education. This dramatic accomplishment was duplicated by teachers organizations in New York and other cities.

Beginning in 1903, Haley began to challenge the NEA leadership council over teacher issues. Since the leadership council was composed mostly of male administrators and professors, most issues relevant to teachers were not placed in high esteem. By organizing teachers within the NEA, the first woman president,

Ella Flagg Young, was elected. After this election, the NEA gave increasing attention to classroom teachers, endorsing higher salaries, equal pay for equal work, and woman suffrage. Moreover, the establishment of the Department of Classroom Teachers in 1912 initiated discussions on the issue of teachers' advisory councils, which were to advise superintendents on school policies (Cresswell, et al., 1980). The influence of these advisory councils was determined by the superintendent, but many suggestions important to teachers were implemented.

By 1920, however, the conservative leaders of the NEA began restructuring the organization to prevent groups like the Chicago Teachers' Federation from taking control. The establishment of a representative assembly made up of delegates representing state and local education associations structured the association along professional lines. The NEA's chief executive officer was a professional administrator who was hired, not elected, to run the organization. The basic direction and character of the association was established, and it steadily advanced in terms of membership, wealth, and power. The NEA continued to become the association for all professionals in education. Through the establishment of departments representing educational groups, the association

gradually added staff and executive secretaries to serve its members (Murphy, 1990).

During the 1970s and 1980s, the NEA's emphasis shifted to national politics. In 1976, the NEA endorsed a candidate for the office of the President of the United States for the first time. It supported Jimmy Carter in both 1976 and 1980 and Walter Mondale in 1984. Ronald Reagan's victory and his Administrations' endorsement of tuition tax credits by his administration created an antagonistic relationship between the NEA and the President. During the 1980s, the NEA supported federal legislation that would have guaranteed collective bargaining rights to all employees in public schools, colleges, and universities (Stern, 1988). The U. S. Secretary of Education, William Bennett, strongly opposed this proposition. The NEA was often criticized by the Reagan Administration as preventing meaningful reform in education.

Membership in the NEA has increased to include nearly 86 percent of all teachers. In addition to providing membership to support personnel in order to encourage increased membership, the NEA adopted other measures. First, the NEA required affiliated associations to pay dues to the national organization. Second, the NEA encouraged state organizations to

require its state members to belong to the national organization. Beginning in 1944, Oregon became the first state to unify its membership. By 1972, the NEA required joint membership of all its affiliates. This drive increased membership, strengthened the national office, and increased local chapter membership in cities (Murphy, 1990). Membership figures for the NEA for 1900 to 1990 are presented in Table 2.1.

American Federation of Teachers (AFT)

On April 15, 1916, three of the Chicago Teachers' Unions and one local association from Gary, Indiana, met to form a new national teachers' union. By May 9, eight local associations were affiliated and then received into the American Federation of Labor as the American Federation of Teachers (AFT). Though the teachers' desire to affiliate with organized labor in the United States was never in doubt, the AFL's platform was revised to include its support of free public schools.

The impetus for the formation of the AFT was threefold. First, leaders in these cities recognized the necessity of a national organization of teachers and valued the support of organized labor. Second, teachers were unhappy about their working conditions.

Table 2.1. Membership of the NEA by Decade from 1900 to 1990

Year	Membership	Increase
1900	2,332	1,267
1910	6,909	4,571
1920	52,850	45,941
1930	172,354	119,504
1940	203,429	31,075
1950	453,797	250,368
1960	713,994	260,197
1970	1,100,155	386,161
1980	1,680,566	580,411
1990	2,057,286	376,720

Source: National Education Association, NEA Handbook, 1991-92, p. 139.

Third, teachers believed the NEA had failed to address teachers' grievances. The leaders of the Chicago Federation of Teachers discovered that the administrators who were resisting their attempts to secure better working conditions were the same ones running the NEA.

The AFT adopted a conventional union model. Two primary national officers were elected, a president and a secretary-treasurer. All executive functions were performed by these officers rather than an executive staff. Leaders of AFT locals serve as unpaid national officers and guide the AFT activities between conventions.

As indicated in Table 2.2, by 1920 the AFT had over 10,000 members. At this time, the NEA became concerned that the dignity of the profession was being threatened through association with organized labor. The NEA, therefore, organized an anti-union campaign directed by its influential deans of education, professors, and state superintendents against the new teachers' union movement which resulted in a decrease in AFT membership (Coleman, 1990). Additionally, during this period the AFT was struggling for its identity due partly to the divergent character of its large urban locals and partly to its emphasis on

Table 2.2. Membership of the AFT by Decades from 1916 to 1990

Year	Membership	Increase or Decrease
1916	1,500	
1920	10,000	8,500
1930	7,000	-3,000
1940	30,000	23,000
1950	41,000	11,000
1960	59,000	18,000
1970	205,000	146,000
1980	551,000	346,000
1990	774,000	223,000

Source: Adapted from Allan C. Ornstein and Daniel U. Levine, Foundations of Education, p. 61.

social and economic reform rather than on educational issues. Unlike the NEA, which devoted most of its attention to educational matters, the AFT spent a great deal of time discussing social and philosophical issues. For example, the AFT was in the forefront of the civil rights movement, and the role and rights of women in education (Cresswell, et al., 1980).

Today, the over 800,000-member AFT is the primary union of teachers in major cities such as New York, Chicago, Philadelphia, Cleveland, Minneapolis, Denver, and Baltimore. The AFT has approximately 2,200 local unions representing teachers, paraprofessionals, and health-care employees (Stern, 1988).

Bargaining Rights for Teachers and Teachers' Unions

Eaton (1975) reported that the first teachers' contract was signed in Cicero, Illinois in 1944. By 1958, however, collective bargaining was rare and only six contracts existed. These contracts were found in Connecticut, Illinois (2), Montana, Rhode Island, and Wisconsin. Prior to this time, the NEA had resisted collective bargaining and the AFT had not been successful in organizing its members. Memberships in both organizations desired professional status similar

to that of doctors and lawyers rather than blue-collar type labor relations.

The most consequential certification election for unionization occurred in 1960 for the teachers in New York City. This election marked the first direct confrontation between the AFT and the NEA concerning bargaining representation. The AFT had adopted its organizing techniques from the AFL-CIO and was significantly aided by the AFL-CIO's Industrial Union Department (IUD). The AFL-CIO assistance of two organizers and a pledge of \$250,000 secured the AFT success in the representative election. The victory by the AFT, however, helped transform the NEA from a professional association dominated by school system administrators into a labor union. The NEA was forced to seek collective bargaining rights for teachers since whenever the AFT was successful in a certification election, NEA membership in the district would decrease due to exclusive bargaining rights. The contract won in 1962 by the AFT is recognized as the spark which resulted in the development of teacher bargaining elsewhere.

Increases in the number of collective bargaining agreements between teachers' unions and local school boards have corresponded with the adoption of favorable state educational labor relations legislation.

Legislation granting collective bargaining rights was first enacted in Wisconsin in 1959 and most industrialized states followed by the end of the 1960s (Stern, 1988). Table 2.3 presents the status of state law concerning teachers bargaining rights as of 1992.

Within the thirty-three states characterized as duty to bargain states, union representation is determined by an election of union members according to state law. Typically, state legislation specifying the rules and regulations is modeled after the Taft-Hartley Act, and labor agency procedures are generally patterned after the National Labor Relations Board.

When union officials believe that considerable union representation is obtained, they will ask the school board to be recognized as the bargaining agent for the teachers. If the school board grants the request, negotiations for the first collectively bargained contract can begin. If the school board refuses, the teachers may petition the state public employee relations board for an election. The petitioning union must prove that membership in the union is for the purpose of representation in collective bargaining.

State laws typically require at least 30 percent of the membership to request union representation. The state public employee relations board may request proof

Table 2.3. Bargaining Rights for Teachers by State, 1992 (Updated by Author).

Duty to Bargain (33 States)

Alaska	California	Connecticut
Delaware	Florida	Hawaii
Idaho	*Illinois	Indiana
Iowa	Kansas	Maine
Maryland	Massachusetts	Michigan
Minnesota	Montana	Nebraska
Nevada	New Hampshire	New Jersey
New York	North Dakota	*Ohio
Oklahoma	Oregon	Pennsylvania
Rhode Island	South Dakota	Tennessee
Vermont	Washington	Wisconsin

Collective bargaining prohibited (6 States)

Alabama
Georgia
North Carolina
Virginia
South Carolina
Texas

Employer authorized but not required to bargain (6 States)

Arizona
Arkansas
Colorado
Kentucky
Louisiana
New Mexico (Changed to Duty to Bargain in 1992)

No bargaining provision (5 States)

Mississippi
Missouri
Utah
West Virginia
Wyoming

Sources: Adapted from Robert G. Valletta and Richard B. Freeman. The NBER Public Sector Collective Bargaining Law Data Set. Summary of State Labor Law. Bureau of National Affairs. March, 1981.
Illinois statute enacted in 1985.
Ohio statute enacted in 1983.

of membership in the union as verified by membership list, dues deduction cards, and membership application cards. The teachers' union must also show that the school board has declined a request by the union to be recognized as the exclusive bargaining agent.

Next, the school board is notified by the state public employee relations board that the union is petitioning for representation. Typically, a conference with the union officials and the school board is arranged to discuss the petition. The school board may agree to union representation or request an election. Details of the election such as the appropriate bargaining unit, voter eligibility, ballot type, time, and place for the election are mutually agreed upon by the teachers' union and the school board. Areas of disagreement are typically resolved through a hearing procedure by the state public employees relations board.

Representation elections are usually held within a specified number of days of the initial petition according to state law. The election is conducted by representatives of the public employees relations board. A majority of the voting employees (50 percent +1) must favor representation before the union can be certified (Leap, 1991).

Frequently locals of the two major teacher organizations attempt to represent the teachers within the district. State law usually requires whether a simple majority or a majority of the voting employees is necessary in order to declare which organization will represent the teachers.

The lack of a state collective bargaining statute does not necessarily mean that teachers cannot organize or bargain. Since few jurisdictions actually make it illegal for school boards to enter into a bargaining relationship with teachers, most teachers have the right to enter into an enforceable collective bargaining agreement. However, the school board is in a stronger position to resist the concerted efforts of teachers if it decides to do so (Leap, 1991).

According to Leibig and Kahn (1987):

The difference between jurisdictions with a collective bargaining law and those without a law is that in the latter, no matter how much the employees support a union and let the employer know of this support, the employer does not have to deal with any union, except if the employer chooses to do so. And the employer can pretty well establish the ground rules on which it will deal with unions. For example, the employer can decide whether it will voluntarily recognize a union or will require an election. The employer can decide whether it will deal with the union as a representative of its members only or as an exclusive representative of all people in a "bargaining unit". Also the employer can unilaterally define the appropriate bargaining unit if there is no statute. (p. 81)

Empirical Findings on the Growth of Teachers' Unions

Prior research on teachers' unions has attempted to answer the question, who joins teachers unions? Rosenthal (1966) examined the determinants of membership in the AFT in New York City and Boston during the early 1960's. He reported that men, less experienced teachers, teachers in large schools, and teachers in large black or Puerto Rican populations were more likely to be union members. Cole (1968) studied teachers in New York City and reported that union members were more likely to be male, young, or Jewish. Hellreigel, French, and Paterson (1970), surveying teachers in the Seattle area, confirmed the finding that members were mostly young males. These studies, generally, analyzed teacher's decisions to join a union and utilized regression techniques.

Moore (1978) analyzed the determinants of teacher unionism and collective bargaining by examining the membership of both the AFT and the NEA. Moore conducted two types of analysis: 1) time series regression using national aggregate data from 1919-1970, and 2) cross-section regression using state-level data in 1969 and 1970. The percentage change in AFT national membership and percentage change in NEA national membership were used as the dependent

variables. Both dependent variables were found to be positively correlated with the percent increase in consumer prices. He found no significant relationship between AFT and NEA membership changes and the percentage of teachers who were male, the percentage of teachers covered by collective bargaining laws, or the membership of the trade union movement.

Moore's cross-section regressions utilized four dependent variables: AFT membership, NEA membership, written agreements, and comprehensive agreements. Both AFT and NEA membership variables had a significant positive relationship to teachers' relative income (the average salary of teachers divided by the average earnings of production workers). Teachers' relative income, however, was not significantly related to either written agreements or comprehensive agreements. The degree of urbanization had a significant, positive relationship with written agreements and comprehensive agreements, but not with either AFT or NEA membership. Location in the South had a significant negative relationship with written agreements. The fraction of teachers who were male was insignificant for all four of the cross-section regressions, just as it was for both of the time series equations.

Saltzman (1982) criticized Moore's study, arguing that representing the growth in AFT membership from

1919 to 1970 in a single model was inappropriate because the character of the AFT had changed from a association which was affiliated with a trade union to an advocate of the concept of collective bargaining. A similar problem was cited in Moore's time series and cross-section regressions for the NEA membership. His conclusion states: "Clearly, for the NEA as well as the AFT, different models are needed to explain organizational membership during different phases in the organizations' histories" (Saltzman, 1982, p. 200).

The language Moore used to distinguish between written agreements and comprehensive agreements is also cited by Saltzman as a weakness. The definition of written agreements was used to encompass both collective bargaining contracts and procedural agreements between the local school board and the organization. Saltzman stated that the vagueness of the operational definitions used to distinguish between the various types of contracts places doubts on the results of Moore's study.

In an attempt to improve the time-series and cross-section models developed by Moore, Saltzman analyzed state level data for 1959-1978 to determine whether the growth of teacher unionism during those years was primarily a result or a cause of public

sector bargaining laws adopted during that period. The time-series regression incorporated the following independent variables: bargaining laws, teacher/school characteristics, labor market conditions, membership in other unions, and attitudes toward unions.

Saltzman concluded that changes in the percentage of teachers covered by collective bargaining contracts were positively related to the enactment of bargaining laws. Further, Saltzman found that causality runs in both directions, but bargaining laws appear to have a much greater impact on the extent of bargaining than the extent of bargaining has on bargaining laws. Saltzman's findings also indicate that male teachers and teachers from large employment units are more likely to start bargaining, than female teachers and those from rural districts.

In summary, initial research on teachers' union growth centered on micro-level studies attempting to identify characteristics of teachers who join unions. Union members were generally identified as being men, less experienced teachers, and teachers in large school districts. More recent studies have indicated the importance of labor relations legislation to secure collective bargaining agreements and the demand by teachers for union services. These studies typically utilize macro-level data in order to explain the growth

of teachers' unions both at the national and state levels.

The Impact of Teachers' Unions

There are two arguments to describe the impact of unions on employment related issues. On the one hand, unions are viewed largely as monopolies in the labor market whose primary economic impact is to raise members' wages at the expense of unorganized labor, and at the expense of the efficient functioning of the economy. Many economists stress the adverse effects of union work rules on productivity, the loss of employment in the organized sector due to union wage increases, and the crowding of the nonunion sector with displaced workers. Additionally, management frequently complains about inflexible operations and work disruptions caused by unions.

On the other hand, some economists argue that unions have beneficial economic and political effects. Industrial relations experts have long stressed the ways in which collective bargaining can induce better management and higher productivity. Unions can increase the development and retention of skills, provide information about the operations of the business, improve morale, and pressure management to be

more efficient in its operations. These benefits are typically referred to as "voice" effects of unionism. (Freeman & Medoff, 1984).

Since the late 1960s, researchers have attempted to study the process and effects of teachers' unions. The monopoly face effects of unions have been researched to document the effects of unions on teacher salaries and fringe benefits. Effects of collective voice have centered on teacher and administrative practices, school governance, worker attitudes, and school reform. These numerous studies have resulted in contradictory evidence, while utilizing considerable variations in research design and techniques.

Monopoly Face Effects of Unionism

Researchers attempting to describe the monopoly effect of union workers examine the differences in salaries and fringe benefits between union and nonunion teachers. Four reviews of union wage effects studies for teachers reached the same basic conclusion (Cooper, 1982; Cresswell & Spargo, 1980; Finch & Nagle, 1984; Lipsky, 1982): unionism has a positive but small effect on salaries. An exception to these finding is the work of Baugh and Stone (1982) who found that teachers' unions increase teachers' salaries by as much as 21 percent. In addition, studies of perceptions of

teachers, superintendents, and school board members indicate that collective bargaining has positive effects on salaries and fringe benefits (Salter, 1986, Rogers, 1988, and Kersey, 1986).

In comparison to the number of studies on the effects of collective bargaining on wages, the effects of collective bargaining on employment and expenditures is relatively unexplored. In the private sector, it is commonly accepted that one of the responses to union wage effects is a reduction in employment (Freeman, 1986). Eberts (1984) reported that collective bargaining had positive effects on the student-teacher ratio but he failed to estimate the size of the effects.

Chambers (1977) reported that collective bargaining did not have a statistically significant effect on educational expenditures, but he noted that his research was carried out on a relatively small cross-section sample of school districts in only one state. Gallagher (1978) studied the school budgets of 133 Illinois school districts and noted a 9 percent differential in total operating expenditures between bargaining and nonbargaining districts. His research suggests that unions have increased nonsalary benefits such as medical and dental insurance, retirement, social security, unemployment insurance, disability

insurance, life insurance, and teacher leave provisions. Although these costs are usually not reported as wage increases, they can represent a substantial increase in expenditures for school districts.

Collective Voice Effects of Unionism

In contrast to the extensive research examining the effect of collective bargaining on teachers' salaries, relatively few studies have examined the effect of collective bargaining on working conditions. Teacher unions typically bargain for contracts which protect the individual teacher, while providing the teacher an environment to maximize productivity. Consequently, teacher contracts are very explicit in certain areas such as the grievance procedure with binding arbitration, working conditions, and seniority benefits.

Freeman (1980) first showed that union workers are less likely to quit their jobs than nonunion workers, even when wages and other factors are held constant. Rees (1991), using data on New York State public school teachers from the mid-1970s, found that teachers with the two strongest types of grievance procedures in their collective bargaining contracts had a lower

probability of quitting than those working under weaker grievance procedures.

Generally, teachers have preferred bargaining for grievance procedures with binding arbitration which allows for a third party to resolve disputes arising under the collective bargaining agreement. Schnauffer (1967) reported that slightly more than one-fourth of the 88 sample contracts had substantive provisions mandating binding arbitration, whereas Goldschmidt, Bowers, Riley & Stuart (1984) found that four out of five large districts' contracts negotiated in 1984 contained provisions subjecting contract disputes to binding arbitration.

The concept of the use of teacher time is frequently interwoven with bargaining over money. Over the past 25 years, teachers have bargained not only over the length of their contract year, but also over the number of work days allocated to classroom instruction (Goldschmidt & Painter, 1978). In addition, teachers have bargained contract provisions on the allocation of time within the workday, such as maximum number of lesson preparations, limits on clerical work or duties, and sufficient preparation time. According to Eberts and Pierce (1980), teachers in bargaining districts spent more time than teachers in nonbargaining districts on nonteaching activities

such as preparing lessons, performing clerical duties, and meeting with parents.

The role of seniority in determining promotions, involuntary transfers, and layoffs has also been expanded through bargaining. Perry (1979) found that seniority has played a greater role than performance in promotions and layoffs in union districts than in nonunion districts. Six of the nine systems he studied used seniority as the sole criterion for layoffs.

In 1976, Murphy and Hoover speculated whether unions and collective bargaining would increase the bureaucratic character of schools, resulting in less flexibility and less professional behavior among teachers, or if bargaining would enhance professional autonomy. Their research suggests that collective bargaining had both effects depending on the local conditions. McDonnell and Pascal (1979) reported that collective bargaining had no effect on classroom operations, but improved staff morale and provided teachers greater autonomy. When teachers' perceptions are compared to principals, superintendents, and school board members, teachers indicate a more positive perception of the outcomes of collective bargaining (Staver, 1986).

Eberts (1984) examined the effect of collective bargaining on several factors known to be determinants

of student achievement utilizing data from a national survey. He concluded the net effect of collective bargaining on teacher productivity was not clear at this time since the effects of collective bargaining were both negatively and positively associated with determinants of students achievement. Kurth's (1987) model using aggregate macro-level data concluded that teachers' unionization contributed to the decline in SAT performance of students. In contrast, Eberts and Stone (1984, 1987) report higher standardized test scores for students of average ability in unionized environments. Similarly, Grimes and Register (1991) reported that black students who attended unionized schools score 13.11 percent above the black SAT mean. These findings suggest a positive productivity effect of collective bargaining for teachers which significantly benefit students.

In conclusion, teachers' unions were organized to improve conditions related to wages and the working environment. Teachers' unions typically believe that the best method to accommodate these needs is through a collectively bargained contract with the school board.

Although not governed by federal legislation, a majority of the states have established educational labor relations acts which enable teachers to unionize and enter into collective bargaining contracts. A

majority of studies analyzing the growth of membership or collective bargaining conclude that the type of collective bargaining legislation significantly impacts union membership. Unfortunately, no attempts have been made to examine teachers' union growth in those states without educational labor relations legislation.

As for the impact of teachers' unions, studies center on the monopoly face of unions, examining the impact of unions on economic issues such as wages and fringe benefits. Most studies conclude that the presence of a collective bargaining agreement has a positive effect on wages, with the effect as small as 3 percent and as large as 21 percent. Studies typically utilizing district level data within one state prior to the passage of duty-to-bargain legislation have attempted to measure the impact of collective bargaining on employment and expenditures.

Studies on the collective voice effects of unionism emphasize the importance of working conditions to improve productivity. Union teachers working under strong grievance procedures are less likely to quit their jobs. Additionally, union contracts provide teachers benefits such as job security by establishing seniority as the basis for promotion, transfers, and layoffs. Finally, researchers studying the effect of

collective bargaining on student achievement have reported both positive and negative results.

CHAPTER 3
THEORY RELATED TO THE GROWTH
AND IMPACT OF UNIONS

Demand and Supply Model of Union Services

Application of the conventional demand and supply framework to union growth conceptually began with Berkowitz (1954). He described trade unions as a seller, not of labor power, but of memberships in the organization. Unions, similar to businesses, receive revenues, incur expenses, and should operate at a marginal profit. Subsequent studies by Ashenfelter and Pencavel (1969), Pencavel (1971), and Ashenfelter and Johnson (1972) expanded the concept that viewed unionism as an asset that provides a flow of services to utility-maximizing workers. These services are considered both private and collective goods for the individual.

Within the Ashenfelter/Pencavel model (1969), the demand for union services is dependent upon the relative price of union services (p), permanent income or wealth (w), the union-nonunion compensation differential (diff), the price of substitutes for union services (s), any net nonpecuniary benefits from a unionized environment (NP), and taste toward unionism (t).

In equation form, demand for union representation is given by

$$U^d = f (p, w, \text{diff}, s, NP, t),$$

where

$$U'_p < 0 \text{ and } U'_w, U'_{\text{diff}}, U'_s, U'_{NP} > 0.$$

The supply of union services, U^s , can be expressed as a function of the relative price (p), the cost of union organizing (CO), the costs of providing and maintaining services to existing members (CS), and union goals (G). The supply for union services can be expressed as

$$U^s = g (p, CO, CS, G),$$

where

$$U'_p > 0 \text{ and } U'_{CS}, U'_{CO} < 0.$$

In the simple market-clearing model, the equilibrium level of unionism, U , will be determined by the interaction of demand and supply so that

$$U = U^d = U^s.$$

Since the equilibrium level of unionism (U) and the price of membership (p) are functions of all of the other variables within the system, the reduced form for the union demand and supply model becomes

$$U = h (w, \text{diff}, s, NP, t, CO, CS, G).$$

In practice, however, these variables are seldom measured directly. Economists and industrial relations experts typically utilize this demand and supply

framework either explicitly or implicitly, when developing models to explain union growth.

Two major perspectives have developed attempting to trace the changes in union membership and union density. Some scholars have explained union growth focusing on historical, economic, legal, psychological, sociological, and political variables. These macro-level studies attempt to identify the primary factors which influence growth and decline of labor unions. Others have focused on the importance of individuals' decisions to join a union. These micro-level studies analyze the individual unionization-related behavior of workers which affects the membership in unions. The primary focus on these studies is on factors increasing the demand for unionization.

Macro-level Determinants of Union Growth

Most explanations of union growth begin with an appraisal of the role of shifts in the structure of employment and its effect on the demand for union services. Specifically, changes in union growth are attributed to increases or decreases in traditionally highly unionized sectors and employment expansion in traditionally nonunion sectors. This hypothesis has been stated in terms of industries, occupation, gender, and full-time/part-time status. Theorists are attracted

to the structural shift hypothesis because of its straightforward and non-accusatory notion that some workers are simply union prone while others are not. Critics of the market shift hypothesis suggest that this approach involves macro-level analyses of micro-level premises about workers' decisions based on taste toward unionism.

Economists attempted to explain union growth and decline in terms of the business cycle. For example, Commons, et al., (1918) explained union membership growth as occurring in times of economic prosperity, whereas membership declines occurred in times of economic hardships. Numerous models explain union growth in terms of cost of living, unemployment rates, and average weekly wages based on the theoretical framework affecting the demand for union services.

In general, these time-series analyses indicate that increases in wages, prices, and employment lead to an increase in the demand for union services, while rising unemployment inhibits the demand for union services (Fiorito & Greer, 1982). Critics contend, however, that insufficient attention is paid to the dynamics of union growth and the importance of sociopolitical climate (Dunlop, 1948). Although it is generally recognized that union growth is procyclical, the business cycle fails to explain within-country

differences in density rates and cross-country trends in union membership.

The legal environment for collective bargaining has been shown to be an important determinant of union growth and decline because it affects the cost of organizing workers. Specifically, labor laws regulate employer opposition to unions, establish union recognition procedures, and promote union security. Also labor laws may affect union density through a "substitution effect" by providing nonunion employees with benefits previously available only through unions (Neumann & Rissman, 1984).

More recently, employer opposition to unions has been recognized as an important determinant of changes in union density rates (Freeman, 1989). Employer resistance, such as discriminatory discharges of union supporters and refusals to bargain with certified unions, can result in negative net nonpecuniary effects of joining a union. A greater assertiveness during collective bargaining negotiations, and the development of human resource management strategies which promote alternatives to unionism, result in increased costs of maintaining services to union workers (Chaison & Rose, 1991). Additionally, employers frequently employ substitutes for union workers, including contracting

out for services and the use of part-time and temporary employees.

Another factor that has been used to explain the growth and decline in unionization is public attitude toward organized labor. Researchers have suggested that the degree of public acceptance toward unions may influence the ability of unions to recruit new members (Bok & Dunlop, 1970). Lipset's (1987) analyses of polling data revealed that the decline in public approval of unions was correlated with decreases in overall union density and with the union success rate in certification elections. Evidence suggests, however, that public attitudes alone explain only a small proportion of within-country and cross-country density rates. For example, Freeman (1986) observed that public approval of unions was steady between 1972 and 1985 when union density fell sharply.

Researchers have recognized that union membership and union density are affected by such major events as wars, economic depression, and the passage of comprehensive labor laws. Typically, union membership expands during wartime because of the increase in the cost of living and the shortage of the labor supply. The pivotal importance of major events is the central premise in the "historical" approach to the study of union growth.

Price and Bain (1989) recently argued that between periods of institutional development and periods of institutional consolidation exist critical turning points affecting union growth. These turning points introduce periods of union development by radically altering the institutional arrangements surrounding the employment relationship. A major contribution of the Price and Bain theory is the distinction between the two periods of union evolution. Traditional models of union growth fail to explain union membership trends during times of institutional upheaval and renewal. During incremental change, models remain useful to explain fluctuations in union membership (Chaison & Rose, 1991).

Micro-level Determinants of Union Growth

While macro-level models emphasize both sides of the demand and supply equation, micro-level models emphasize the demand for union services by the individual. Many researchers believe that the central issue of the collective action of unionization lies in the individual decision to support or join the union. According to Wheeler and McClendon (1991), studies examining individual workers' decisions to join a union can be organized under three main headings.

The first type, Model A, utilized the works of Festinger (1957) explaining cognitive dissonance theory. It posits dissatisfaction as setting in motion a search to end the uncomfortable dissonance between what is desired by the worker and what is actually obtained. It then shows the employee making a judgment as to whether supporting a union would obtain the wished-for level of employment-related outcomes, thereby ending the dissonance. If the employee believes these wage and nonpecuniary benefits will result when he joins a union, the demand for union services will increase.

Model B is derived entirely from utility theory. In this second model, increases in the demand for union services will result whenever an employee chooses to support a union based solely on whether doing so would have positive utility. Unlike Model A, the employee is not required to experience dissonance to put the decision process in motion. The image of employee decision making used here is one of the constantly calculating individual who will act to support a union whenever the expected increase in wages or nonpecuniary benefits exceeds the cost.

The third model, Model C, describes the unionization decision affecting the demand for union services based entirely on political and ideological beliefs.

Unlike the other models, the decision to join a union by an employee is not represented by a rational decision making process. The inclusion of Model C as a major theoretical framework stems largely from the view of scholars that ideology and class feelings play a role in union supporting behavior. This model exemplifies the importance of an employee's taste toward unions as a factor in the decision making process.

In order to test these models, scholars frequently rely on a number of factors as correlates to the individual's decision to support union formation. These variables are frequently analyzed in order to explain union certification election results. The relationship between job satisfaction and union voting behavior is the most frequently examined issue in individual-level studies (Premack, 1984). Fiorito, Gallagher, and Greer (1986) concluded that a negative relationship has been consistently found between a prounion decision and the level of job satisfaction. The evidence, however, is mixed with respect to whether particular facets of job satisfaction are more important than others. Economic aspects of satisfaction are more likely to be related to the unionization decision than other issues related to job satisfaction.

Occupation of the employee has been included in most individual level studies. Researchers generally conclude that white-collar workers are more difficult to organize than blue-collar workers (Fiorito & Greer, 1982). Typically, researchers tend to avoid generalizations by occupations.

The attitudes of employees toward unions have been among the more heavily researched determinants of unionization. Two groups of independent variables are utilized by researchers to analyze employee's attitude toward unions. First, there is a set of variables which are various measures of union image and attitudinal predispositions toward unions. This includes general attitudes about unions, attitudes about specific unions, perceived union corruption, and perceptions of union power (Kochan, 1979; Schriesheim, 1978; and Hills, 1985). Second, there is a set of variables which measure workers' perceptions of the effectiveness of unions in generating desired outcomes. This is commonly referred to as perceived union instrumentality (Premack & Hunter, 1988; Montgomery, 1989).

More recently, studies have examined how normative or social pressures influence an individual worker's decision to vote for union certification. Workers' perceptions of how referent others wished them to vote

have been found to have a significant effect on their voting intentions (Youngblood, DeNisi, Molleston, & Mobley, 1984). Similarly, Zalesny (1985) found that individuals who believe that social forces favored unionization were more likely to vote for a union. Montgomery (1989) concluded, after studying public university clerical workers, that influence of other workers, family members, and immediate co-workers had a significant effect on intent to vote for union formation, while the view of supervisors did not.

Researchers studying the impact of demographic variables on union growth have hypothesized that younger workers are more likely to support unionization than older workers, that female workers are less likely to unionize than male workers, and that non-white workers are more likely to support unionization than white workers. The reasoning behind these predictions has included such explanations as younger workers are more militant than older workers, women appear to be averse to aggressive union activities, and blacks are presumed more prone to collective social action.

The research results of the effects of age, sex, and race on union formation, however, are mixed. Some studies (Farber & Saks, 1980; Bigoness, 1978; and Maxey & Morhman, 1980) have concluded that younger workers are more prone to support a union, while Kochan (1979)

found no support for the claim. Race may be the one demographic variable for which substantial support exists (Kochan, 1979; Farber & Saks, 1980; and Fiorito, Gallagher, & Greer, 1986). In contrast, studies indicate that education (Voos, 1983), marital status (Hills, 1985), and rural background (Farber & Saks, 1980) have a negligible effect on union formation.

In summary, the demand and supply framework constitutes the basis for subsequent research explaining the growth of unions. Macro-level models emphasize both the demand and supply factors based on historical, economic, legal, or political variables. Micro-level models emphasize the demand for union services based on the individual's decision to participate in union activities.

Demand and Supply Model for Municipal Labor Markets

The impact of teachers' unions on wages, employment, and expenditures are typically placed in a demand and supply model of municipal labor markets. These models are often used in studies focusing on union effects in the public sector (Freeman, 1986; Ehrenberg & Schwarz, 1986).

In these models, demand for public employees is derived from the demand for government services.

Demand for government services is generally specified to be a function of the price of the service (p), the community's "taste" for the service (t), and the community's ability-to-pay (a). Public sector unions are viewed as using their political power to raise the demand for public services (Freeman, 1986); thus, the presence of a union (u) represents an important component of the demand function. In equation form

$$D_L = f (p, t, a, u).$$

Similarly, the supply of public employees is specified to be a function of the price of the service (p), the availability of workers having the skills or desire to work in various government occupations (s), and the favorableness of alternative employment opportunities (e). In equation form

$$S_L = f (p, s, e).$$

Using the demand and supply equations, the reduced form for municipal wages (W) can be written as:

$$W = f (t, a, u, s, e).$$

Changes in employment rates and expenditures are affected by the same components (Valletta, 1989).

Public employee unions are presumed to alter the labor demand through the use of political influence over the budgetary process. If public unions are able to win settlements to the right of the municipal labor demand curves, both wage and employment outcomes will

be greater than in the absence of unionism.

Furthermore, by affecting wage and employment outcomes, municipal unions are likely to increase municipal expenditures (Valletta, 1989).

The variables which represent the components of the equations for wages, employment, and expenditures will be presented in Chapter 4.

CHAPTER 4

DATA COLLECTION AND METHODOLOGY

This study examines labor relations with teachers' unions in large public school districts in states without favorable collective bargaining legislation. Districts in Arizona, Arkansas, Colorado, Kentucky, Louisiana, and New Mexico were selected because local school districts are authorized but not required to bargain with teachers' unions. In addition, districts in Mississippi, Missouri, Utah, West Virginia, and Wyoming were also selected because these states do not have statutory bargaining provisions.

School districts with students enrollments over 10,000 were selected for the following reasons: (1) teachers' unions frequently target larger school districts to initiate union activities due to decreases in organizing costs, and (2) larger school districts within a state are identified as models for other districts. If union activity is present within a state, it should be evident in the larger districts. Additionally, most states contain a considerable number of school districts with less than 1,000 students. Although the 106 local school districts represent less than 6 percent of the total number of school districts in those states, they serve over 30 percent of the student membership.

Data Collection

Two types of data were used in this study: local school district data obtained by surveying school superintendents and district data obtained from various government publications.

Survey Instrument

A survey was conducted of 106 superintendents from public school districts with student enrollments of 10,000 or more in the eleven selected states. The survey was intended to provide the following information concerning the school district: (1) the labor relationship between the teachers' unions and the school board, (2) average teachers' salary and per-pupil expenditure, (3) the superintendent's perception of teachers' concerns of financial and educational reform issues and (4) the superintendent's perception of the unions' endorsement of school board candidates.

There were several reasons for this focus. First, since these school districts are located in states without public sector collective bargaining legislation, there is no source, such as a state labor relations board, to obtain the frequency of collective bargaining requests and certification election results. Second, teachers' salary and per-pupil expenditures in the districts as reported by state departments of

education cannot be compared since these are not reported consistently by the states. Third, the superintendent's perception of teachers' concerns with financial and educational reform issues may provide insight into future demand for union services by teachers. Lastly, the literature is relatively void of information concerning teachers' unions political activities within the states without favorable collective bargaining legislation.

A review of the literature provided sample surveys of school administrators and teachers concerning union membership and collective bargaining (Kerchner & Mitchell, 1980; Stewart, 1980; Boulter, Leonard, & Williams, 1989). An item pool was established based on these surveys and an initial prototype of the survey instrument for this study was prepared. The developed instrument was then presented to district level administrators to establish face validity. The survey was revised to include a question requesting a description of a critical or key incident which may have resulted in union growth in the district.

Survey instruments (See Appendix A) were mailed in June, 1992 to the selected school superintendents. A second mailing was made to nonrespondents three weeks later. A total of 83 completed surveys were returned for a response rate of 77.4 percent.

Table 4.1 shows the total number of school districts, the number of school districts included in the sample, and the number of school districts which responded by individual state. One school district was eliminated since the student enrollment was presently below 10,000 students. Data from 82 school districts were analyzed.

Table 4.2 presents the information by sampled states comparing the number of teachers employed in the state, the mean of teachers employed per district, and the mean of teachers employed in the districts surveyed. Superintendents reported the total number of teachers employed in the school system during the 1991-92 school year. The mean for all surveyed districts was 1,443 teachers employed.

Table 4.3 compares the average salary of teachers in the state to the mean of the salaries reported by superintendents for the teachers in their district. The mean for all responding districts was \$29,935. Generally, the average salary reported by the superintendents in the surveyed school districts were more than the average salary statewide. One explanation for this occurrence is salaries are traditionally higher in metropolitan areas as compared to rural areas due to the higher cost-of-living.

Table 4.1. Comparison of Surveyed States Total Number of Districts, Total Number of Surveyed District, and Total Number of Respondent Districts.

State	Total Districts	Surveyed	Respondents
	1	2	3
Arizona	219	19	12
Arkansas	324	2	2
Colorado	176	16	14
Kentucky	177	4	4
Louisiana	66	21	18
Mississippi	151	5	5
Missouri	543	12	10
New Mexico	88	5	2
Utah	40	12	9
West Virginia	55	8	5
Wyoming	49	2	1
Totals	1888	106	82

Source: Column 1 from National Education Association 1991-92 Estimates of School Statistics, (1992),

Table 1, p. 35.

Column 2 from: Arizona Department of Education, Statistical and Financial Data for Fiscal Year 1989-90; Arkansas Department of Education, Annual Statistical Report of the Public Schools of Arkansas; Colorado Department of Education, Colorado Education and Library Directory 1990-91; Kentucky Department of Education, Profiles of Kentucky Public Schools: Fiscal Year 1989-90; Louisiana Department of Education, The 140th Annual Financial and Statistical Report; Department of Education of Mississippi, Annual Report of the State Superintendent of Public Education; Department of Education of Missouri, The 1988-89 Report of the Public Schools of Missouri; New Mexico Department of Education, The 1990-91 New Mexico Educational Personnel Directory; Utah Department of Education, Summary of Statistical and Financial Data of the State Superintendent of Public Instruction 1989-90; West Virginia Department of Education, West Virginia Annual Report 1989-90, Vol II; Wyoming Department of Education, Wyoming Education Directory, 1990-91.

Table 4.2. Total Number of Teachers Employed and Average Number of Teachers Per District in Sample States Compared to Mean of Number of Teachers Employed in Respondents' Districts.

State	Number of Teachers Employed	Mean of Teachers per District	Mean of Survey Respondents N=82
	1	2	3
Arizona	34,648	158	1,017
Arkansas	25,997	80	703
Colorado	32,826	186	1,665
Kentucky	37,160	211	2,399
Louisiana	45,401	688	1,689
Mississippi	27,824	184	972
Missouri	53,304	98	1,142
New Mexico	15,458	176	817
Utah	17,941	449	1,191
West Virginia	21,039	383	1,148
Wyoming	6,014	122	881

Source: Column 1 from U.S. Department of Education, (1991) Public and Private Elementary and Secondary Education Statistics: School Year 1991-92, Table 7, p. 7. Column 2 from author's computation.

Table 4.3. Teachers' Average Salary in Sample States Compared to the Mean of Respondents' Districts.

State	Average Salary	Mean of Respondent Districts N=82
		2
	1	
Arizona	\$31,892	\$33,310
Arkansas	26,569	29,535
Colorado	32,926	34,427
Kentucky	30,880	31,250
Louisiana	27,087	24,789
Mississippi	24,428	26,947
Missouri	28,880	33,875
New Mexico	26,653	24,141
Utah	26,524	26,479
West Virginia	27,298	29,282
Wyoming	29,000	29,898

Source: Column 1 from National Education Association
1991-92 Estimates of School Statistics, (1992), p. 13.

In order to obtain information concerning the school district's total expenditures, superintendents were requested to supply the total per-pupil expenditures for the school year 1991-92. The mean for all reporting districts was \$3,716. Table 4.4 presents the average districts' expenditure per pupil in each state compared to the districts surveyed.

Information concerning the frequency of requests for certification elections, certification election results, and negotiated collective bargaining agreements was obtained from the survey instrument. Additionally, information concerning the date of such occurrences was analyzed in order to describe current unionization and collective bargaining practices.

The relationship between the school board and the teachers' union were addressed in two questions. First, school superintendents were requested to characterize the relationship between the school board and the teachers' organization to determine whether a cooperative or adversarial relationship exists. Additionally, school superintendents were asked how actively were teachers' union endorsing school board candidates.

Superintendents rated the degree of concern of teachers regarding four financial and five educational reform issues. Superintendents rated teachers'

Table 4.4. Average Expenditure Per Pupil in Sample States Compared to the Mean of Respondents' Districts.

State	Average Expenditure Per Pupil	Mean Reported by Respondents N=82
	1	2
Arizona	\$4,417	\$3,838
Arkansas	3,833	3,500
Colorado	5,172	4,224
Kentucky	4,039	4,125
Louisiana	4,249	3,173
Mississippi	3,155	3,046
Missouri	4,086	4,328
New Mexico	4,094	3,035
Utah	2,827	3,079
West Virginia	4,941	4,300
Wyoming	5,946	4,922

Source: Column 1 from U.S. Department of Education, (1992), Public and Private Elementary and Secondary Education Statistics: School Year 1991-92, Table 12, p. 12.

concerns of salary, teacher benefits, pupil/teacher ratio, and declining local revenues. Superintendents also rated teachers' concerns regarding teacher evaluation programs, student testing, curriculum issues, certification requirements, and America 2000 National Goals. This information was used to assess potential development of unionization and collective bargaining in school districts.

Archival Data

Demographic and economic data were collected from The Census of Population and Housing Reports (1990) published by the U.S. Department of Commerce. The average manufacturing production workers' wage data for 1987 was obtained from 1987 Census of Manufacturing, Geographic Area Survey published by the U.S. Department of Commerce. District unemployment data were obtained from the Supplement to Employment and Unemployment in States and Local Areas (1991) published by the U.S. Department of Labor. Since the percentage of public sector unionized workers is not available at the local school district level, yearly estimates of state level data for 1988 from Curme, Hirsch, and Macpherson (1990) were utilized. Regional codes were assigned to each school district according to geographic divisions as

defined by the U.S. Census Bureau. The variable MOUNT was excluded from analysis.

Table 4.5 provides a list of the variables included in the wage, employment, and expenditures analysis. Data sources, and variable definitions are also included. Table 4.6 provides the means and standard deviations for each variable. The school districts surveyed are separated into school districts with a collective bargaining agreement and without a collective bargaining agreement.

Research Methodologies

A two-phased methodology was used to address the research questions. Phase 1 analyzed the superintendents' response to key incidents concerning teachers' unionization. Phase 2 analyzed the statistical relationship between teachers' unions and teachers' wages, districts' employment rates, and per-pupil expenditures.

Phase 1: Qualitative Study

Key or critical incidents as reported by superintendents which resulted in teachers becoming involved in union activity were analyzed using the constant comparative method (Glaser & Strauss, 1967; Lincoln & Guba, 1985). Responses were unitized

Table 4.5. Dependent and Independent Variables, Data Sources, and Definitions.

Dependent Variable	Data Source	Definition
lnWAGE	1	The natural log of the average teachers' salary of the district.
lnTEACH	1	The natural log of the number of teachers employed in the district.
lnEXPEND	1	The natural log of the district's per-pupil expenditure.
Independent Variable	Data Source	Definition
CBA	1	The presence of a collective bargaining agreement between the school board and teachers' union.
ENDORSE	1	A measure of the superintendent's perception of the teachers' union endorsement of candidates for school board. The values of this variable are measured on a 6 point scale where 0 is never endorsed, 1 is extremely inactive, 2 is inactive, 3 is somewhat active, 4 is active, and 5 is extremely active.
PCTUNION	2	The percentage of public sector workers employed in the state.
UNEMP	3	The percentage unemployment rate in the municipality for 1991.
HOUSING	4	The median value of housing in the municipality.
lnPCI	4	The natural log of per-capita income of municipal residents.

Table 4.5: continued

Independent Variable	Data Source	Definition
NONWHITE	4	The percentage of municipal population that is nonwhite.
POP	4	The municipal population.
PCTBS	4	The percentage of the municipal population that has graduated from college.
lnOPW	5	The natural log of the average hourly wage of manufacturing production workers in the municipality.
WNC	4	Regional dummy variable for West-North Central geographic division.
SATL	4	Regional dummy variable for South Atlantic geographic division.
ESC	4	Regional dummy variable for East-South Central geographic division.
WSC	4	Regional dummy variable for West-South Central geographic division
MOUNT	4	Regional dummy variable for Mountain geographic division.

Data Sources:

(1) from survey instrument.

(2) from M. A. Curme, B. T. Hirsch, and D. A. Macpherson (1990), Union Membership and Contract Coverage in the United States, Industrial and Labor Relations Review, Table 5, p. 22.

(3) from U.S. Department of Labor, (1991) Supplement to Employment and Unemployment in States and Local Areas.

(4) from U.S. Department of Commerce, Bureau of the Census, (1990), The Census of Population and Housing Reports,

(5) from the U.S. Department of Commerce (1987), 1987 Census of Manufacturing, Geographic Area Survey.

Table 4.6. Variable Means and Standard Deviations for Respondent Districts With Collective Bargaining Agreements (CBA) and Without Collective Bargaining Agreements.

Variable	With CBA		Without CBA	
	N=26		N=56	
	Mean	Std Dev	Mean	Std Dev
lnWAGE	10.395	.125	10.239	.146
lnTEACH	7.286	.657	6.916	.561
lnEXPEND	8.305	.165	8.140	.218
ENDORSE	3.462	1.655	2.375	1.712
PCTUNION	23.965	4.723	20.677	5.235
UNEMP	4.612	1.394	5.564	1.851
HOUSING	71853.846	16238.774	65526.786	17583.200
lnPCI	9.494	.129	9.374	.216
NONWHITE	18.758	18.599	26.915	21.546
POP	159019.154	217966.489	92909.893	151162.867
PCTBS	22.623	10.008	22.774	9.644
lnOPW	2.338	.167	2.273	.231

on index cards such that each unit obtained only one characteristic. The response cards were then categorized into provisional categories which apparently related to the same content. The method of constant comparison resulted in three distinct categories. The categories were determined to be consistent with prior research as presented in Chapter 3.

Phase 2: Quantitative Analysis

Using a demand and supply model of municipal labor markets, separate equations were specified and estimated using ordinary least squares (OLS) regression analysis to determine the impact of teachers collective bargaining on wages, employment, and expenditures. This is consistent with prior research (Valletta, 1989; Baugh & Stone, 1982; Gallagher, 1978, Chambers 1977). The relationship between the variables and the demand and supply municipal labor equations will be discussed in Chapter 6 when the estimating equations are presented.

CHAPTER 5

QUALITATIVE DISCUSSION OF UNIONIZATION

Teachers' unions and collective bargaining became commonplace throughout most of the United States by 1977 and especially in states which fostered collective bargaining agreements through legislation (Saltzman, 1982). This chapter attempts to answer the question: What is the extent of teachers' union activity in large school districts in states without favorable collective bargaining legislation?

Unionization in States Without Favorable Legislation

Teachers' unions organizing in states with favorable collective bargaining legislation enjoy significant advantages over teachers' unions organizing in states without favorable legislation. According to the demand and supply model of unionization, workers will join unions if (1) unions are viewed by teachers as a mechanism for improving various employment-related issues, and (2) unions supply their services to teachers.

Favorable collective bargaining legislation affects both the demand and supply side of unionization. First, by increasing the power of unions and, consequently the likelihood of establishing a

collective bargaining agreement with the school board, favorable collective bargaining legislation increases the unions ability to affect employment conditions. Issues such as wages, benefits, and the operation of the school district are frequently subjects of contract negotiations. Second, teachers' unions can supply services to members in states having favorable collective bargaining legislation more efficiently due to the decrease in the cost of organizing and supplying services. Teachers' unions in established collective bargaining states do not experience the costs related to court proceedings. At the same time, they can profit from agency shop fees collected from all teachers.

In states without collective bargaining laws, however, unions do not enjoy power through legislative enactment. School boards have more freedom to choose how to deal with teachers' unions, particularly with regard to the establishment of the collective bargaining relationship, i.e., the cost of unionization increases.

This decreases the incentives for unions to supply their services. This does not mean teachers in these states do not demand union services and that unions do not supply their services. Teachers still demand union services, and the services are provided by unions

through collective bargaining and other political activities. The major difference is that collective bargaining occurs only when allowed by the school board--there is no duty to bargain.

In the absence of the requirement to bargain with teachers' unions, how does union growth and collective bargaining occur? Consistent with the demand and supply model, teachers appear to join unions when they become dissatisfied with present aspects of their working conditions. The surveyed superintendents reported that three broad issues were important to the growth in union membership within their districts: (1) wages, (2) job security, and (3) a voice in administrative decisions.

Incidents affecting salaries were identified most frequently by the superintendents as the key incident which increased teachers' involvement in unions. Declines in teachers salaries in some school districts in Arizona, Louisiana, New Mexico, Arkansas, and Missouri were identified as affecting the growth of teachers' unions. Some districts which provided "lower salary increases" to teachers also witnessed increased union activity.

One superintendent from Missouri noted that when the school district had a large balance of funds, but failed to increase teachers' salaries, the result was

an increase in teachers' interest in unionization. These incidents are consistent with the demand and supply model which would indicate an increase in the demand for union services when teachers view unions as a mechanism to increase or protect wages.

The second key incident most frequently described by superintendents was related to job security. When facing financial difficulties, school districts frequently decide to reduce the number of employees to decrease expenditures. Superintendents documented the impact of implementing reduction in force policies on union activity. For example, a superintendent indicated that due to financial difficulty in 1989, the district "riffed" 33 professional staff and abolished 260 other positions. Another superintendent noted that when reduction in force for noninstructional staff personnel was implemented in 1988, the teachers "panicked" and began joining the union. Unions were perceived to provide nonpecuniary benefits to teachers by protecting them from the implementation of reduction-in-force policies.

Lastly, superintendents reported that a variety of administrative factors served as key incidents in the district which resulted in teachers demanding a greater voice in decision making. Teachers desiring input in administrative decisions, believe that union

activities will result in more shared decision making. For example, in response to Louisiana's comprehensive teacher evaluation program, superintendents indicated that teachers became increasingly more union oriented in order to repeal educational reform legislation.

Superintendents also documented the leadership style of previous superintendents as being a key incident which resulted in increased union activity. A superintendent of a Colorado school district described a former superintendent as "paternalistic" while in another district a former superintendent was described as a "new, task-oriented superintendent". Both were given as explanations for increased activity in teachers' unions. This suggests that the teachers' perception of the union's ability to counteract these developments, led to increased demand for unionization.

As a result of demand for union services, union membership has remained constant or increased over the past twenty years in states without favorable collective bargaining legislation. This is demonstrated in Table 5.1 which compares membership data and the percentage of teachers affiliated with the NEA from 1975 to 1990 in these eleven states. AFT membership data are not available.

Table 5.1. NEA Membership Data and Percentage of NEA Membership in Surveyed States Comparing 1975 to 1990.

<u>State</u>	<u>Number of Teachers</u>		<u>Percentage NEA</u>		<u>Percentage Difference</u>
	1975	1990	1975	1990	
	1	2	3	4	5
Arizona	23,482	32,987	78.07	74.66	- 3.41
Arkansas	21,821	25,984	43.46	55.32	+11.86
Colorado	28,452	32,342	85.01	87.80	+ 2.79
Kentucky	32,300	36,777	85.54	89.44	+ 3.90
Louisiana	40,428	43,882	26.35	45.31	+18.96
Mississippi	24,130	28,062	22.13	34.91	+12.78
Missouri	48,563	52,304	29.52	36.44	+ 6.92
New Mexico	12,887	16,703	79.31	38.63	-40.68
Utah	12,952	17,884	80.21	84.77	+ 4.56
West Virginia	20,175	21,476	78.40	69.42	- 8.98
Wyoming	4,991	6,784	96.77	89.92	- 6.87

Source: Column 1: U.S. Office of Education, Digest of Educational Statistics (1976) Table 48, p. 50;
Column 2: U.S. Office of Education, Public and Private Elementary and Secondary Education Statistics: School Year 1991-92, Table 7, p. 7.
Column 3, 4, and 5: computed by author from National Education Association membership data contained in NEA Handbook, 1976 Table 2, p. 137 and NEA Handbook, 1991, Table 2, p. 156.

The demand for union services created by concerns over wages, job security, and a desire for a voice in administrative decisions allows teachers' unions to provide services to teachers. Teachers' unions, however, seek to minimize operating expenses while attempting to increase membership. Thus, teachers' unions typically request collective bargaining rights for its members so that the teachers' unions may operate more efficiently by engaging in a collective bargaining agreement.

Collective Bargaining Rights

As is true in states having favorable collective bargaining legislation, once the teachers' union in a school district has obtained substantial membership and status, the union typically petitions the school board to conduct a certification election. This election is held to determine: (1) if a majority of the teachers wish to enter into a collective bargaining agreement, and (2) which teachers' union will represent the teachers in negotiations. The lack of collective bargaining legislation means that the school district has control of the process. Results from the survey reported in Table 5.2 indicate the frequency of requests by teachers' unions for certification

Table 5.2. Request by Teachers' Union for Certification Election and Number of Elections Held by Decades 1960-1990 in Surveyed Districts by State.

Year(s)	Request for CBA by State	Total Request	Elections Held
1960s	Arizona (1) Colorado (5) Kentucky (2) Missouri (1) Utah (1)	10	9
1970s	Arizona (2) Arkansas (1) Colorado (4) Louisiana (2) Missouri (2) Utah (2)	13	10
1980s	Arizona (1) Colorado (1) Missouri (2) Louisiana (1) West Virginia (2)	7	4
1990s	Louisiana (1) Missouri (1) New Mexico (2)	4	1
	Totals	34	24
Total Sampled Districts 82			

elections in the districts surveyed by state across decades.

Thirty-four school boards received requests by a teachers' union to conduct a certification election. Requests were received by school boards in each state with the exception of Mississippi and Wyoming. Twenty-four school boards conducted a certification election. Six school districts (Gallup and Santa Fe, New Mexico; Baton Rouge and Houma, Louisiana; and Morgantown and Clarksburg, West Virginia) refused to conduct certification elections. Four school districts (North Kansas City and Florissant, Missouri; and Salt Lake City and Ogden, Utah) voluntarily recognized the teachers' union without an election.

Twenty-four certification elections were conducted which resulted in negotiated collective bargaining contracts in twenty-three school systems. Only one system (Springfield, Missouri) conducted a certification election in which neither of the two major teachers' unions obtained a majority vote of the teachers. Hence, the school board did not recognize either union and did not enter into collective bargaining. All four of the school districts that voluntarily recognized the union without an election entered into a collective bargaining agreement with the union.

In general, the success in obtaining collective bargaining agreements during the 1960s and 1970s has not continued into the 1980s and 1990s. The decrease in union activity is similar to what has occurred in other public services at the federal and municipal levels (Freeman, 1986). The decline in requests for collective bargaining may reflect the adverse political climate in which unions have been operating in recent years. Alternatively, the trends may simply indicate that all of the organizable districts had already been organized by 1980.

**The Future of Teachers' Union Growth
and Collective Bargaining
in Surveyed Districts**

Through the remainder of the 1990s, school boards may have to continue to operate under extreme financial distress while implementing educational reform which may affect the demand for union services. School superintendents were asked to provide their perceptions of the "level of concern" of teachers' in their school districts regarding nine educational issues. Financial concerns addressed included teacher's salaries, teacher's benefits, pupil/teacher ratio, and declining local revenues. Educational reform issues addressed included new teacher certification requirements,

teacher evaluation programs, curriculum issues, student testing, and America 2000 national goals. A rating of 1 indicated a very low level of concern while 5 indicated a very high level of concern by teachers.

Table 5.3 examines the superintendents' responses regarding the teachers' level of concern over the four financial and five reform issues. The data are separated into districts with collective bargaining agreements and without collective bargaining agreements. Analysis of variance (ANOVA) was performed which determined that mean differences for evaluation programs was statistically significant ($F=5.36$; $p<.05$).

Generally, superintendents rated levels of concern of teachers of financial issues higher than educational reform issues. School superintendents in school districts without collective bargaining agreements rated levels of teachers concerns higher on all issues except salary than school superintendents in school districts with collective bargaining.

Teacher evaluation programs were rated by superintendents as of higher concern to teachers than other reform issues. Among all reform issues, superintendents in districts with collective bargaining rated levels of concerns lower than superintendents in districts without collective bargaining. Although not

Table 5.3. Superintendents' Perception of Teachers' Level of Concern in School Districts Without Collective Bargaining Agreements (CBA) Compared to School District With Collective Bargaining Agreements.

Issue	Mean Without CBA N=56	Mean With CBA N=26
FINANCIAL CONCERNS		
Salary	4.69	4.73
Teacher Benefits	4.35	4.35
Pupil/Teacher Ratio	4.11	3.81
Declining Local Revenues	3.85	3.77
EDUCATIONAL REFORM CONCERNS		
*Evaluation Programs	3.95	3.53
Student Testing	3.51	3.19
Curriculum	3.44	3.15
Certification	2.67	2.23
America 2000 National Goals	2.46	2.15

***statistically significant $p < .05$**

statistically significant, collective bargaining agreements may provide teachers protection from changes in certification, evaluation programs, and other reform legislation.

The high level of concern of teachers reported by superintendents in school districts without collective bargaining could indicate growth for teachers union. These issues are representative of key incidents reported by school superintendents to increase union activity in school districts. Specifically, issues of salaries and benefits, changes in certification and evaluation requirements, and educational reform which changes job expectations, could lead to increased demand for union services.

School districts, however, which are under financial restraints may not be willing to engage in collective bargaining with teachers unions. School board members and superintendents generally believe that collective bargaining agreements limit their options when responding to financial crises.

Teachers' unions frequently engage in political activities possibly as a substitute for collective bargaining. The most logical and immediate attempts are to influence decision making on the local school boards. School superintendents were surveyed to determine if the teachers' union had ever endorsed a

candidate for school board. Seventy-nine percent of the respondents indicated that the teachers' union had endorsed a candidate for the school board. A follow up question asked how active the teachers' union had been in endorsing school board candidates, utilizing a scale of extremely inactive (=1), inactive (=2), somewhat active (=3), active (=4) and extremely active (=5). The mean of the superintendents' responses in districts with a collective bargaining agreement ($\bar{M}=3.462$) is higher than the mean of superintendents' responses in districts without a collective bargaining agreement ($\bar{M}=2.375$).

Teachers' unions with collective bargaining are more likely to participate in political activities than districts without collective bargaining. However, of those that do participate, over sixty-two percent reported political activity ranging from somewhat active to extremely active. Nearly seventy-three percent of the superintendents in districts with collective bargaining reported union endorsement from somewhat active to extremely active.

Additionally, superintendents were asked to characterize the relationship between the local school board and the teachers' union using a scale of highly cooperative, cooperative, neutral, adversarial, and

highly adversarial. Approximately, sixty-five percent of the superintendents surveyed in school districts with or without collective bargaining agreements indicated a cooperative relationship between the school board and the teachers' union. Capitalizing on this positive relationship, teachers' unions may lobby school board members for policy changes which improve working conditions. Since teachers may benefit from this relationship, the need to establish a collective bargaining agreement may not result. In effect, the union's political activities and positive relationship with the school board may be a substitute for collective bargaining.

To summarize, superintendents in surveyed districts without collective bargaining reported the teachers' level of concern on issues such as salaries and job security as being greater than superintendents in districts with collective bargaining. Indeed, teachers' concerns with educational reform issues such as certification, student testing programs, and evaluation programs as reported by superintendents are greater in districts without collective bargaining than with collective bargaining. These issues have been identified by school superintendents as increasing the demand for union services.

The survey results also indicate that teachers' unions in districts with collective bargaining and, to a large degree, in districts without collective bargaining, engage in political endorsement of school board candidates. This is important because teachers unions may obtain significant political power through the endorsement of school board candidates (Wellington & Winter, 1971).

CHAPTER 6
UNION IMPACT ON WAGES, EMPLOYMENT,
AND EXPENDITURES

A research question of this study was to determine the effect of collective bargaining agreements on teachers' wages, employment levels, and district expenditures in the eleven states without favorable collective bargaining legislation.

The influence of public employee union activities can be placed in a supply and demand model of municipal labor markets (Ehrenberg & Schwarz, 1986; Freeman, 1986). In models focusing on union effects, demand for public employees is derived from the demand for government services. Demand for government services is generally specified to be a function of the price of the service, the community's "taste" for the service, and the community's ability to pay. Public sector unions are generally viewed as using their political power to raise the demand for public services (Freeman, 1986).

Ability to pay and taste for government services can be represented by per-capita income of local residents (lnPCI), the median value of housing within the municipality (HOUSING), and the percentage of the

municipal population which has graduated from college (PCTBS). Union political activity, as evident by the endorsement of school board candidates (ENDORSE), is represented by a scale from 0 to 5, where 0 represented that the union has never endorsed a candidate; 1 is extremely inactive; 2 is inactive; 3 is somewhat active; 4 is active and 5 is extremely active. A dummy variable representing the existence of a collective bargaining agreement (CBA) between the school board and the teachers' union is included in the analysis.

The supply of labor to local governments is typically specified as being positively related to the price of the services, the availability of workers having the skills or tastes to work in government occupations, and to measures of the favorableness of alternative employment opportunities. The average hourly wage of manufacturing production workers (lnOPW) represents the quality of alternative employment opportunities while the unemployment rate of the municipality for 1991 (UNEMP) is used to represent the availability of alternative employment opportunities. The percentage of the population that is nonwhite (NONWHITE) is included to represent the possibility that workers' taste for employment in education may vary. Ortiz (1982) reported that minorities had

difference beliefs, attitudes, and values concerning various occupations.

Three additional characteristics of the school district which may affect public labor markets are included in the estimating equations. The population of the municipality (POP) and the percentage of unionized public sector workers in the state (PCTUNION) are included as in previous studies. In order to control for regional differences, region dummy variables (WNC, SATL, ESC, and WSC) were also included. MOUNT was excluded in the analysis. (See Table 4.3 for definition of the variables)

Empirical Model, Estimation, and Results:

Teacher Wages

The reduced form of the supply and demand equations for municipal labor markets can be written as:

$$\begin{aligned} \text{(equation 1) } \ln WAGE = & f(\ln PCI, HOUSING, PCTBS, \\ & ENDORSE, CBA, \ln OPW, UNEMP, NONWHITE, \\ & POP, PCTUNION, WNC, SATL, ESC, WSC) \\ & + e. \end{aligned}$$

Equation 1 was estimated using the natural log of the average yearly salaries ($\ln WAGE$) as the dependent variable in the multiple regression analysis. Ordinary least squares was used to obtain estimators of the regression parameters. The ordinary least squares

regression results for equation 1 are presented in Table 6.1.

As expected, the presence of a collective bargaining agreement (CBA) has a significant effect on teachers' salaries. The average annual teachers' salary in a district having a collective bargaining agreement is over 9 percent higher than the average annual salary in a school district which does not bargain. The average hourly wage of manufacturing production workers in the municipality (lnOPW) and the median value of housing in the municipality (HOUSING) have significant effects on average annual teachers' salaries.

Political endorsement (ENDORSE) had a nonsignificant association with teachers' salaries. These results suggest that the political activity of endorsing school board candidates by teachers' unions does not increase wages.

To test the stability of the model, stepwise regression was conducted. The results, reported in Appendix B, indicate that the presence of a collective bargaining agreement (CBA), the average hourly wage of manufacturing production workers in the municipality (lnOPW), the median value of housing in the municipality (HOUSING), and the percentage of the

Table 6.1. Ordinary Least Squares Coefficient Estimates for lnWAGE Equation.

Variable	Beta	Standard Error
lnPCI	.03121	.10617
HOUSING*	3.12301E-06	1.86769E-06
PCTBS**	-4.63617E-03	2.20099E-03
ENDORSE	-5.26347E-03	8.19105E-03
CBA**	.09206	.02957
lnOPW***	.20684	.06711
UNEMP	-.01873	.01389
NONWHITE	3.12301E-06	1.86769E-06
POP	9.00020E-08	7.63630E-08
PCTUNION	9.41026E-04	5.05306E-03
WNC*	.09907	.05501
SATL	.09935	.07943
ESC	.03924	.07920
WSC	-.04306	.06240
constant***	9.44658	.96465

F = 7.60676 ****

R² = .64740

N = 82

* Statistically significant at the .05 level; ** at the .025 level; *** at the .005 level; **** at the .0005 level (one-tailed tests).

population graduated from college (PCTBS) remained statistically significant.

Empirical Model, Estimates, and Results:

Teacher Employment

As indicated, the derived demand for labor in the public sector is a function of the cost of labor, the presence of a union, the community's "taste" for the service, and the community's ability to pay. Because teachers' unions affect wages, and wages affect employment, teachers' unions have both direct and indirect effects on employment. To estimate the total effects of teachers' unions on employment, the reduced form of the employment equation was estimated.

The reduced form employment equation includes all the independent variables in equation 1 (Valletta, 1989). The reduced form equation for employment can be written as:

$$\begin{aligned} \text{(equation 2) } \ln\text{TEACH} = & f(\ln\text{PCI}, \text{HOUSING}, \text{PCTBS}, \\ & \text{ENDORSE}, \text{CBA}, \ln\text{OPW}, \text{UNEMP}, \text{NONWHITE}, \\ & \text{POP}, \text{PCTUNION}, \text{WNC}, \text{SATL}, \text{ESC}, \text{WSC}) \\ & + e. \end{aligned}$$

Equation 2 was estimated using the natural log of the number of teachers employed by the school district ($\ln\text{TEACH}$) as the dependent variable in the multiple regression analysis. Ordinary least squares was used

to obtain estimators of the regression parameters. The ordinary least squares regression results for equation 2 are presented in Table 6.2.

The results indicate that the presence of a collective bargaining agreement (CBA) significantly affected the number of teachers employed in the district. The average number of teachers employed in the district having a collective bargaining agreement is approximately 39 percent higher than the average number of teachers employed in districts which do not bargain. This finding supports the notion that public sector unions are able to increase the demand for educational services.

The endorsement of school board candidates (ENDORSE) was not significantly related to the employment of teachers in the school district. The municipal population (POP), the percentage of unionized workers in the state (PCTUNION), the unemployment rate for the municipality (UNEMP), and the average hourly wage of manufacturing production workers in the municipality (lnOPW) positively and significantly affect employment.

Stepwise regression analysis yielded similar results and are reported in Appendix C. The effect of the presence of a collective bargaining contract, however, was decreased to approximately 36 percent.

Table 6.2. Ordinary Least Squares Coefficient Estimates for lnTEACH Equation.

Variable	Beta	Standard Error
lnPCI	.17266	.53455
HOUSING	1.26965E-05	8.97832E-06
PCTBS	7.74791E-03	.01093
ENDORSE	1.32399E-03	.04062
CBA***	.39184	.14839
lnOPW***	.95580	.33078
UNEMP*	.11864	.06874
NONWHITE	3.11030E-03	3.59976E-03
POP**	7.80185E-07	3.85711E-07
PCTUNION*	.05022	.02533
WNC	.25515	.27487
SATL	.20023	.37913
ESC**	.98319	.38337
WSC***	.97503	.31439
constant	-.20409	4.85051

F = 2.98327 ***

R² = .40250

N = 82

* Statistically significant at the .05 level; ** at the .025 level; *** at the .005 level; **** at the .0005 level (one-tailed tests).

Empirical Model, Estimates, and Results:

Expenditures

The reduced form expenditures equation included all of the independent variables in equation 1 (Valletta, 1989). The reduced form equation for expenditures can be written as:

$$\begin{aligned} \text{(equation 3) } \ln\text{EXPEND} = & f(\ln\text{PCI}, \text{HOUSING}, \text{PCTBS}, \\ & \text{ENDORSE}, \text{CBA}, \ln\text{OPW}, \text{UNEMP}, \text{NONWHITE}, \\ & \text{POP}, \text{PCTUNION}, \text{WNC}, \text{SATL}, \text{ESC}, \text{WSC}) \\ & + e. \end{aligned}$$

The per-pupil expenditure of a school district is expected to be positively associated with the presence of a collective bargaining agreement (CBA), and also the endorsement of school board candidates by teachers unions (ENDORSE). The ordinary least squares results for per-pupil expenditures are presented in Table 6.3.

The presence of a collective bargaining agreement (CBA) had a significant, positive effect on per-pupil expenditures ($\ln\text{EXPEND}$). The average per-pupil expenditures in school districts with collective bargaining agreements is over 9 percent higher than the average of school districts without collective bargaining agreements. The only other variable having a significant effect on district expenditures is the average wage of manufacturing production workers in the municipality ($\ln\text{OPW}$).

Table 6.3. Ordinary Least Squares Coefficient Estimates for lnEXPEND Equation.

Variable	Beta	Standard Error
lnPCI	.18505	.18251
HOUSING	-9.30040E-07	3.11966E-06
PCTBS	1.53198E-03	3.72535E-03
ENDORSE	.01914	.01390
CBA*	.09093	.05072
lnOPW****	.40685	.10999
UNEMP	-9.96147E-03	.02318
NONWHITE	-3.28956E-04	1.23602E-03
POP	-1.13652E-07	1.58307E-07
PCTUNION	-8.68731E-03	8.38575E-03
WNC	.08979	.08964
SATL	.13968	.12749
ESC	-.06669	.13073
WSC	-.04697	.10329
constant***	5.72756	1.68265

F = 4.21686 ****

R²= .54144

N = 82

* Statistically significant at the .05 level; ** at the .025 level; *** at the .005 level; **** at the .0005 level (one-tailed tests).

Stepwise regression analysis, reported in Appendix D, were conducted which estimated significant effects on per-pupil expenditures (lnEXPEND) for the following variables: the average wage of manufacturing production workers in the municipality (lnOPW), and the per-capita income of the municipal residents (lnPCI), and the presence of a collective bargaining agreement (CBA). Additionally, this analysis estimates the effects of a collective bargaining agreement on per-pupil expenditures to be approximately 9 percent.

Discussion

The results of the ordinary least squares estimates indicate that the presence of a collective bargaining agreement in large school districts in the eleven states without favorable collective bargaining legislation has a significant effect on teachers wages estimated to be approximately 9 percent. This finding is similar to previous studies on the impact of collective bargaining on teachers' wages (Cooper, 1982; Cresswell & Spargo, 1980; Lipsky, 1982). Since the majority of these school districts first negotiated collective bargaining contracts during the 1960s and 1970s, this would suggest that teachers' unions made consistent demands for wage increases during contract negotiations.

The endorsement of school board candidates by teachers' unions occurs more often in school districts with collective bargaining agreements. Overall, however, the endorsement of school board candidates by teachers unions did not statistically affect teachers' wages. This would indicate that the decision of a teachers' union to endorse school board candidates is difficult to predict, and the results of such endorsements are equally unpredictable.

As evidenced by the statistically significant effect of opportunity wages on the wages of teachers, school districts are affected by the average wage earning ability of workers in the community. Since school districts compete for workers in the community with other businesses, wages must be competitive in order to obtain a significant number of workers. On the other hand, voters compare salaries of teachers with other services, such as fire and police, as well as with their own salaries, when deciding to vote on tax measures. These political, business, and socioeconomic factors affect teachers' wages.

The significant, but unexpected negative association between the percentage of population which have graduated from college and the yearly salary of teachers is noted. There is no theoretical reason, however, to explain this finding.

With regard to employment, the results indicate that the presence of a collective bargaining agreement has a significant effect of approximately 39 percent on the number of teachers employed in the school district. The ordinary least squares estimates of the reduced form employment effects are similar to effects reported by Trejo (1991) for police and fire departments. As with past research, the OLS estimates in this study assumed the presence of a collective bargaining agreement to be exogenous; these results may be biased than if a simultaneous equations model were estimated.

Overall, it appears teachers' unions are able to shift the demand for labor thus enabling them to increase both wages and employment. Teachers unions are expected to accomplish this through the endorsement of school board candidates but these findings indicate that endorsement of school board candidates did not significantly increase employment levels.

In fact, increased teacher employment may be a result of the negotiation process in which teachers' unions request additional benefits for teachers which affect both wages and employment rates. Employment of teachers is affected by factors which are traditionally bargained for such as planning time, class size, and student enrichment or remediation programs. Overall, these provisions in collective bargaining contracts

necessitate the employment of additional personnel. These provisions, however, are presented to constituents as improvements in the educational program, and are further justified by appealing to the belief that these programs positively impact student achievement.

The empirical results indicate that collective bargaining does have a statistically significant effect on per-pupil expenditures. These results are similar to Chambers (1977) who argued that the very existence of a collective bargaining contract may affect the preferences of decision makers with regard to educational services. That is, since teachers recognize that larger school budgets lead to greater benefits, the union will attempt to exert every possible influence on the demand for educational quality and, hence, on school district budget decisions.

CHAPTER 7

SUMMARY AND CONCLUSION

Summary

This study examined the extent of teachers' unions activities in the eleven states without favorable collective bargaining legislation and the impact of collective bargaining agreements on teachers' wages, employment, and per-pupil expenditures. Specifically, public school districts in Arizona, Arkansas, Colorado, Kentucky, Louisiana and New Mexico were selected because legislation authorizes school districts to enter into collective bargaining, but does not require school districts to do so. School districts in Mississippi, Missouri, Utah, West Virginia, and Wyoming were included because there is no legislative provision concerning collective bargaining for teachers. School districts were selected based on student enrollments of over 10,000.

A two-phased methodology was used to address the research questions. Phase 1 was a qualitative study which examined aspects of the school district and teachers' union labor relations. This study utilized data from a survey of school superintendents in selected districts in order to obtain factual information concerning labor relations between teachers' unions and the school board. Survey

instruments were distributed to 106 school superintendents of which 83 responded. Data from 82 districts were analyzed. Phase 2 was a quantitative study using multiple regression techniques to examine the statistical relationship between teachers' union activities and teachers' wages, employment rates, and per-pupil expenditures. Government publications provided additional district demographics and economic data.

The results of the qualitative study indicate that teachers' unions are actively engaged in collective bargaining with school boards even though school boards are not required by law to do so. Approximately thirty percent of the school districts engage in collective bargaining negotiations with the majority of collective bargaining contracts first being negotiated during the 1960s and 1970s. Since that time, school districts have received fewer requests from teachers' unions for certification elections and have been more reluctant to allow certification elections to be held after receiving requests.

In contrast, however, membership data and the rating by superintendents of teachers' level of concern for four financial and five educational reform issues suggest that the demand for services provided by teachers' unions exists. Teachers' concerns over

issues such as wages and job security as reported by superintendents are greater in districts not presently governed by collective bargaining agreements than in districts with collective bargaining agreements.

The survey results also indicate that teachers' unions in districts with collective bargaining and, to a large degree, without collective bargaining, engage in political endorsements of school board candidates. The political activities of teachers' unions may contribute to the establishment of cooperative relationships between teachers' unions and school boards.

Phase 2 of the study utilized multiple regression analysis to examine the effects of collective bargaining on teachers' wages, employment rates, and per-pupil expenditures in these districts. The empirical results indicate that collective bargaining has a significant, positive effect on wages, estimated to be approximately 9 percent. The effect of a collective bargaining contract on employment rates was estimated to be approximately 39 percent. The effect of collective bargaining on per-pupil expenditures was found less statistically significant and was estimated to be approximately 9 percent. The effect of endorsements by teachers' unions of school board

candidates, however, was statistically insignificant in the three equations.

Potential for Union Growth

The potential for teachers' union growth in the states without favorable collective bargaining legislation centers on the demand for union services by teachers, the resistance by school boards to unions, and the possibility of a change in legislation which would require school boards to bargain with teachers.

Teachers' unions were first organized to address common concerns such as the establishment of tenure rights, legitimate salary schedules, and retirement programs. Union activities were initially successful in obtaining remedies for these concerns. Therefore, in order for union demand to continue after successfully obtaining objectives, events must occur which serve to initiate teachers' concerns such that the demand for union services will continue. Superintendents reported that three broad issues were important to the growth in union membership within their districts: (1) wages, (2) job security, and (3) a voice in administrative decisions.

Superintendents rated the teachers' level of concern with salaries as the highest of nine educational issues. The average salary paid to

teachers varies considerably from state to state, as well as from district to district within a state, which results in teachers comparing salary levels to other teachers, both at the national and state level.

Teachers' decisions to join a union may be based on either cognitive dissonance theory or utility theory which focuses on whether joining the union can result in the desired increase in wages. Since the present average teachers' salary in the eleven states without favorable collective bargaining legislation is lower when compared to other states, teachers who recognize these differences may choose to join a union which could increase the demand for union services.

Additionally, superintendents reported that teachers' levels of concern in changes in working conditions such as teacher evaluation programs, student testing, teacher certification, and curriculum innovations were higher in districts without collective bargaining than in districts with collective bargaining. This reflects the belief that teachers may enjoy a greater sense of job security toward changes in working conditions as a result of a collective bargaining agreement. Two factors contribute to this "voice" benefit of union membership: (1) teachers' unions lobby legislators in an effort to shape and influence new legislation, and (2) union officials

provide data and information to support the union positions. Since many states have enacted educational legislation which affect working conditions, the demand for union services should continue when teachers perceive the union as capable of providing job security.

School boards, however, may continue to deny certification elections to teachers' unions as evidenced number of certification elections recently held in the surveyed districts. School boards can implement managerial practices which alter labor relations within a district and affect the demand for union services. For example, the establishment of site-based management with a teacher advisory committee would establish a means for teacher "voice" which could reduce the demand for union services.

The enactment of duty-to-bargain legislation which would require school boards to bargain with teachers' unions remains a possibility in the remaining ten states since New Mexico presently has a duty-to-bargain law. Bills have been introduced in the Louisiana legislature which would require school districts to bargain with teachers' unions, but these laws have not been enacted. The governor, who was endorsed by the teachers' unions, has indicated he would sign a bill

mandating duty to bargain if adopted by the Legislature.

In summary, this study examined the extent of teachers' unions activities in large public school districts in the eleven states without favorable collective bargaining legislation. The key findings of this study are that superintendents' perception of teachers' concerns suggest that the demand for union services should continue, and that the presence of a collective bargaining agreement between a school board and a teachers' union significantly affect teachers' wages, employment rates, and per-pupil expenditures.

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APPENDICES

APPENDIX A
SURVEY INSTRUMENT

June 28,1992

**Dr. Charles Hundley
Superintendent
Abilene ISD
P.O. Box 981
Abilene, TX 79604-0981**

Dear Dr. Hundley:

Imagine that due to changes in state law, your district would be required to change the present labor relations with the teachers' union in your district. Your district, unlike the majority of school districts throughout the nation, operates within a legal structure which presently does not require or prohibit collective bargaining agreements with teachers' unions. The purpose of this project is to determine the present level of teachers' organization, the frequency of request by teachers' unions to enter into collective bargaining, and the school board's response to such request.

Your school district's response is very important since your district was selected due to your district's large student population which prior research has indicated to have a high correlation to union growth. The instrument has been piloted with a sample of school superintendents and has been designed to require a minimum of time.

It will be appreciated if you will complete the enclosed form prior to July 15th and return it in the stamped envelope which is enclosed. I welcome any additional comments you may have concerning the study. Your responses, however, will be held in strict confidence. All districts responding to the survey will receive a summary of the results of the study. Thank you for your cooperation.

Sincerely,

**Malcolm M. Duplantis
Ph.D. Candidate**

Code_____

SCHOOL DISTRICT'S LABOR RELATIONS SURVEY

Please answer the following questions regarding your school system's labor relationship with teachers.

1. Has a teachers' union requested that a certification election be held to determine the union's right to represent teachers in negotiations with the school board?

_____No. Please proceed to Question 7.

_____Yes, if so when: 19____, and

by which national teachers' organization

_____American Federation of Teachers

_____National Education Association

2. Has the school board authorized a certification election with teachers as the bargaining unit?

_____No, school board refused to allow certification election. Please proceed to Question 7.

_____No, but voluntarily recognized union as bargaining agent without a certification election. Please proceed to Question 6.

_____Yes, if so when: 19____. What were the results of the election:_____

3. After the request for collective bargaining but prior to the certification election, did school board members, supervisors, and principals receive inservice training concerning collective bargaining?

_____No

_____Yes - If so, on what topics:_____

4. After the request for collective bargaining but prior to the certification election, was printed literature distributed to teachers concerning benefits provided by the district without union representation?

_____No

_____Yes - If so, what benefits were explained

5. After the request for collective bargaining but prior to the certification election, did the school district employ a labor relations consultant or attorney?

_____No

_____Yes

6. Has the school board entered into a collective bargaining agreement with the teachers union?

_____No

_____Yes - if so when: 19____.

7. Teachers' union growth in a school district is often associated with a critical or key incident which results in a large number of teachers becoming involved in union activity. Please describe such an event if this did occur in your district.

8. What national teachers' organization is the majority of the teachers in the district a member?

_____American Federation of Teachers (AFT)

_____National Education Association (NEA)

_____Other, please specify name

9. Has the teachers' union engaged in a teachers' strike?

_____No

_____Yes - If so in what years?

What was the major issue concerning the strike?

10. Has the teachers' union ever endorsed a candidate for school board?

_____No

_____Yes -

If yes, on average how active has the teachers' union been in endorsing school board candidates?

(Circle one)

Extremely
Inactive

1

2

Somewhat
Active

3

4

Extremely
Active

5

11. In general, how would you characterize the relationship between your school board and the teachers' organization? (Circle one)

Highly
Cooperative

1

2

Neutral

3

4

Highly
Adversarial

5

12. Please describe your district during the 1991-92 school year according to the following:

_____Total number of teachers

_____Total number of Black teachers

_____Total number of male teachers

_____Average teacher's salary

_____Per Pupil Expenditure

_____Number of School Board Members

13. Has your district implemented a reduction-in-force policy affecting teachers?

_____No

_____Yes - If so, what year(s)

_____.

14. Has your district implemented salary reduction or "freezes"?

_____No

_____Yes - If so, in what year(s)?

14. Please rate the "level of concern" of teachers in your school district concerning the following educational issues (1 would indicate very low level concern while 5 would indicate a very high level of concern).

	Low			High	
New teacher certification requirements	1	2	3	4	5
Teacher evaluation programs	1	2	3	4	5
Teacher's salaries	1	2	3	4	5
Curriculum issues	1	2	3	4	5
Student testing	1	2	3	4	5
Teacher benefits (insurance, leave policy)	1	2	3	4	5
Declining revenue in district	1	2	3	4	5
Pupil/teacher ratio	1	2	3	4	5
America 2000	1	2	3	4	5

16. What changes in legislation, if any, in the present state statutes concerning collective bargaining do you anticipate?

17. Comments: _____

Please complete the following information concerning yourself:

Name _____

Position _____

Telephone Number () _____

Please return the completed form in the postage-paid, reply envelope. Thank you very much for your cooperation, and please be assured of the anonymity of your responses.

Malcolm M. Duplantis
106 Fence Row
Schriever, La. 70395
(504) 868-4267

APPENDIX B

ORDINARY LEAST SQUARES COEFFICIENT ESTIMATES FOR

lnWAGE EQUATION USING STEPWISE METHOD

Variable	Beta	Standard Error
HOUSING***	2.99570E-06	1.04592E-06
PCTBS*	-2.99956E-03	1.68805E.03
CBA***	.08960	.02664
lnOPW****	.24285	.05977
WNC*	.08287	.03776
WSC***	-.10216	.03471
constant		

F = 17.21709 ****

R² = .61017

N = 82

* Statistically significant at the .05 level; ** at the .025 level; *** at the .005 level; **** at the .0005 level (one-tailed tests).

APPENDIX C

ORDINARY LEAST SQUARES COEFFICIENT ESTIMATES FOR
lnTEACH EQUATION USING STEPWISE METHOD

Variable	Beta	Standard Error
HOUSING**	1.20829E-05	5.20882E-06
CBA***	.36739	.13350
lnOPW****	1.03718	.29063
UNEMP*	.10429	.05821
POP**	7.24430E-07	3.55327E-07
PCTUNION**	.04153	.01728
ESC***	.84471	.25596
WSC****	.81922	.21073
constant	1.90731	1.10486

F = 5.03723 ****

R² = .37210

N = 82

* Statistically significant at the .05 level; ** at the .025 level; *** at the .005 level; **** at the .0005 level (one-tailed tests).

APPENDIX D

ORDINARY LEAST SQUARES COEFFICIENT ESTIMATES FOR
lnEXPEND EQUATION USING STEPWISE METHOD

Variable	Beta	Standard Error
lnPCI*	.22053	.10421
CBA*	.09522	.04425
lnOPW****	.38497	.09762
WNC*	.11567	.05602
SATL*	.16748	.08485
constant****	5.18026	.94178

F = 12.48288 ****

R²= .51406

N = 82

* Statistically significant at the .05 level; ** at the .025 level; *** at the .005 level; **** at the .0005 level (one-tailed tests).

VITA

Malcolm Michael Duplantis was born and educated in Terrebonne Parish in Southern Louisiana. He and his wife, Wanda, have four children (Malcolm, Jr., Dienielle, Jenee', and Jacques). He is presently employed as a principal at Coteau-Bayou Blue Elementary School in the Terrebonne Parish School System. His professional affiliations include the National Association of Elementary School Principals, the South Central Association of Elementary School Principals, the Louisiana Association of School Executives, and the Louisiana Association of Principals. He has served as an officer in the Terrebonne Principals Association and the Louisiana Association of Elementary School Principals. He is certified to serve as an evaluator in the National Assessment Center for the National Association of Secondary School Principals and was a participant in the 1990 National Superintendents' Academy.

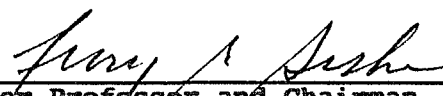
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Malcolm M. Duplantis

Major Field: Education

Title of Dissertation: Teachers' Collective Bargaining: Its Occurrence and Impact on Wages, Employment and Expenditures in States Without Collective Bargaining Legislation

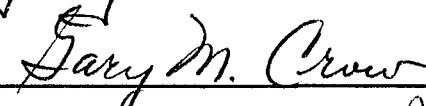
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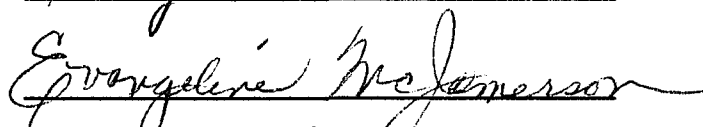

Major Professor and Chairman

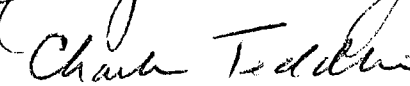

Dean of the Graduate School

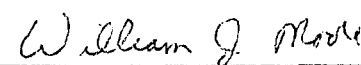
EXAMINING COMMITTEE:


Co-Chairman









Date of Examination:

4/6/1993
